



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

*Mining*

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June 16, 1988

Mr. Kenneth R. Poulson  
Brush Wellman, Incorporated  
Salt Lake City, Utah 84115

Dear Mr. Poulson:

Re: Surety Estimate, Topaz Mining Property, M/023/003, Juab County, Utah

I have reviewed the surety estimate that was included in the Revised Reclamation Plan received June 10, 1988. I have several questions and concerns with the estimate which I would like to discuss with you during a visit to the mine site. My concerns are listed below.

#### Phased Bonding

The Plan proposed a phased approach to bonding with the bond amount adjusted annually. This type of bonding requires a considerable amount of paperwork and labor every year. I recommend, instead, that the site be bonded for a "steady state" situation which normally exists at a strip operation where the amount of reclamation each year, or period of years, roughly balances with the amount of new surface disturbances that occur each year.

I do not know if this type of bonding is possible in Brush Wellman's case. It can be easily checked out, however, by developing a bar graph showing remaining reclamation costs versus years, or mining cycles, for a 10 to 15 year period. If this reclamation cost is relatively uniform, I believe that a bond can be posted that will require adjustment only in the case of inflation or changes in the plan. Releases of reclaimed areas can then be accomplished by Division inspection and written notice to Brush Wellman, rather than with a more complicated Board approval and bond adjustment.

#### Reclamation Cost Assumptions

It appears that some of the assumptions used in preparing the cost estimate (Appendix VI) are somewhat idealistic. The Division applies a ten percent contingency to cost estimates, but this contingency is primarily included to help defray costs of possible bond forfeiture. Therefore, cost assumptions should not be based on ideal conditions, but rather on the most probable conditions. The cost assumptions which I question are delineated below.



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1. Topsoil Placement - It appears that the assumption was made that all of the topsoil stockpiles will be located at the toe of the dump and immediately adjacent to an already constructed road leading to the top of the dump. This appears to be overly optimistic. It is also not clear as to how the extremely high production figures were developed for topsoiling of the 45-degree dump surfaces.
2. Cover Tuff Disposal Cells with Rhyolite - The four stockpiles of rhyolite spaced equally around the cell are certainly convenient. Will this be the actual case at the mine site?
3. Operator Efficiency - An excellent operator is assumed in the majority of the calculations. An average operator with a correction factor of .75 would appear to be more realistic.
4. Ripper Production - Does the ripping rate of .85 acre/hour for coarse rhyolite dump surfaces accurately reflect Brush Wellman's past experience with this material?
5. Supervision costs should be included for reclamation of a mine site of this magnitude.
6. Are all of the proposed water diversions to be implemented early in the mining cycle or are some of these to be installed as part of the reclamation work?

I hope that the above mentioned concerns can be resolved during our tentatively scheduled meeting onsite on July 12, 1988. The Division would like very much to wrap up this case.

Sincerely,



Frank J. Filas  
Reclamation Engineer

clj  
cc: R. Bayer, JBR  
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0842Q/13-14